REMARKS

This submission is in response to the Official Action dated July 13, 2006. Claim 11 has been substituted for claim 1 and Claims 2 and 4-10 are pending. Claim Reconsideration of the above identified application, in view of the foregoing amendments and the following remarks, is respectfully requested.

Claims 1, 2, and 4-6 were rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. In the Office Action the Examiner took the position that the claims have been amended to contain subject matter which was not described in the specification at the time the application was filed. More specifically, the Examiner asserted that the phrase from cancelled claim 1 which states: "said function checker outputting a predetermined control signal into said control unit **when** said function checker receives a predetermined signal from the various vehicle information data," is not taught in the specification. It is the Examiner's position that part of this limitation (i.e., "said function checker outputting a predetermined control signal into said control unit") is taught on page 6, but that the specification does not teach "**when** the predetermined control signal is outputted by the function checker." The applicant respectfully draws the Examiner's attention to page 6, lines 12-17, which provides that:

> When an "on" action signal, as the resultant of an "on" action of the ignition switch 13, is inputted into the F/C 22, the F/C 22 outputs a predetermined control signal to the control unit 10 via the communication line 24 and the connector 21, as shown with the left direction arrow line in Fig. 1. (Emphasis added.)

Thus it is clear that the predetermined control signal is output by the function checker (F/C 22) when an "on" action signal is inputted into the F/C 22. One of ordinary skill in the art reading the application as a whole would understand the "on" action signal to be the claimed "predetermined signal from the various vehicle information data." Thus the specification provides support for this limitation.

Claim 1 has now been cancelled in favor of new claim 11. It provides that "said function checker is configured such that, when a predetermined signal from said first switch is transmitted to said

function checker through said first and third communication lines, said function checker transmits a predetermined control signal to said central processing unit through said fourth and second communication lines." Support for this specific language can be found at page 5, line 26 to page 6, line 26.

The Examiner further rejects all of the claims under section 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. In particular, the Examiner notes that claim 1 recited "a self-diagnosis function for self-diagnosing a verification of a reception of a signal concerning a switch," but fails to make mention in the body of the claim how to diagnose the verification. New claim 11 and current claim 7 call for a control unit "configured to self-diagnose a verification of a reception of signals from a plurality of switches." These claims have been amended to clarify that the control units is configured to perform the verification. Thus, it is submitted that this rejection has been overcome by the present amendments.

Claim 7 was rejected under section 112 for lack of antecedent basis for the phrase "the plurality of switches." By the present amendment, claim 7 has been amended to specifically provide the antecedent basis for this term.

The Examiner in the office action also states that the "connecting means for connecting" in claim 1 is improper under section 112, sixth paragraph. New claim 11 overcomes this by reciting a "connector."

The Examiner has maintained the rejection of claims 1, 2, and 4-10 under 102(b) as being anticipated by Ishii et al. (U.S. Patent No. 5,552,488). As a result of the amendments to the claims, Applicant asserts that the present claims distinguish over this reference.

The present invention is directed to a control system for a vehicle configured to self-diagnose verification of the reception of signals from a plurality of switches. The system, according to amended independent claims 7 and 11, includes a control unit configured to verify reception of the signals from the switches, a function checker connected with the control unit, first and second

communication lines connecting first and second switches to the control unit, a third communication line to provide the first signal to the function checker. According to claim 7 there is a fourth communications line for sending a pseudo second signal from the function checker to the control unit through the second communication line when the function checker receives the first signal. The control unit is configured to activate the self-diagnosis function when it receives the pseudo signal.

Claim 11 states that function checker is configured such that, when a predetermined signal from said first switch is transmitted to said function checker through said first and third communication lines, said function checker transmits a predetermined control signal to said central processing unit through said fourth and second communication lines; and the central processing unit activates self-diagnosis function based on said predetermined control signal.

Thus, in claims 7 and 11 the pseudo signal or the predetermined signal causes the control unit to activate the self-diagnosis function automatically to establish a self-diagnosis mode based on a signal from the checker (page 9, lines 21-18, of the Specification).

Ishii discloses a diagnosis apparatus for a vehicle control system including an electronic control unit (ECU) 51 and an external diagnosing unit 27 which can be connected to the ECU 51 via connector 28, e.g., by a service engineer when the vehicle is being inspected or repaired (Ishii, column 4, lines 52-61). There are two modes of self-diagnosis where one of the modes provides a diagnosis with higher precision (Ishii, column 5, lines 47-50). The operator performs a predetermined operation to the external diagnosing unit 27 so that the normal mode of the ECU 51 changes to the check mode (Ishii, column 5, lines 57-65). Ishii does not disclose that the external diagnosing unit 27 receives any signal from the any vehicle switch in order to put it in the self-diagnosis mode.

Ishii does not disclose or suggest "a third communication line for said function checker to intercept the first signal from said first commutation line" as recited in claim 7. While it may show communication lines from switches, such as switch 45, to the electronic control unit 51, Ishii fails to disclose an way for that signal to be provided to external diagnosing unit 27. In addition, Ishii does

not disclose a pseudo signal from the function checker to the control unit that is sent though a communication line from a second switch, let alone a pseudo signal that causes the control unit to perform the self-diagnosis function. Thus, Ishii clear does not anticipate amended claim 7.

Ishii further fails to disclose that the connector attached to the checker is attached to the first and second communications lines from first and second switches as required by new claim 11. It also fails to disclose the function checker transmitting a predetermined control signal to the central processing unit in response to receiving a signal from the first switch and the predetermined control signal causing the control unit to activate the self-diagnosis function, as set forth in new claim 11. Ishii's ECU 51 receives data from the diagnosing unit 27, such as a command to switch modes of the self-diagnosis program, e.g., a normal mode or a check mode, using a check mode flag CMF (Ishii, column 6, lines 40-47). However, this command does not cause the control unit to activate a self-diagnosis function, as set forth in the claims, but merely switches the self-diagnosis mode. Additionally, as shown in Fig. 3, the data is transmitted from the diagnosing unit 27 to the ECU 51 after the self-diagnosing routine already started, and therefore, the data cannot be used to activate the self-diagnosing routine. Furthermore, Ishii's external diagnosing unit 27 does not receive any signal from the vehicle switches.

For the aforementioned reasons, Ishii fails to teach or suggest all of the features of the present invention as set forth in claims 1 and 7. Claims 2-6 and 8-10 are dependent on claims 1 and 7 and are therefore also patentable for at least the same reasons.

The Examiner has issued a new rejection of claims 7-10 under 35 U.S.C. § 103 based on the Ishii patent in view of U.S. Patent No. 4,497,057 of Kato et al. Kato was cited to show a plurality of switches 1a, 1b and 1c connected over separate lines to a centralized supervisory system 6 that can perform self-diagnosis. (Figs. 1 & 3; Col. 3, lines 31-67) However, in Kato there are a plurality of engine operation control computers 4 that perform self-diagnosis on their operations. It is only results of these checks that are sent to system 6. Switches 1a and 1b merely determine the diagnosis data to be selected and displayed, and switch 1c initializes the diagnosis data stored in RAM. (Col.

3, lines 30-56). Thus, neither Kato nor Ishii disclose that the "control unit activates the self-diagnosis function for verifying the reception of two separate signals from two separate switches."

Further, claim 7 requires "a first communications line connecting said control unit with a first switch to transmit a first signal issued from the first switch to said control unit." However, neither Ishii nor Kato disclose "a third communication line for said function checker to intercept the first signal from said first communication line." In fact, Kato does not appear to have a function checker. In addition, claim 7 requires "a second communications line connecting said control unit with a second switch to transmit a second signal issued from the second switch to said control unit." However, neither reference has "a fourth communications line for transmitting a pseudo signal of the second signal from said function checker to said control unit through said second communication line when said function checker receives the first signal."

In view of the above, Applicant believes the pending application is in condition for allowance.

Dated: January 15, 2007

Respectfully submitted,

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